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Ethanol: Policies, production, and profitability

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Booming commodities: How long will it last?

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Who would have thought that we would once again see \$3 corn and \$10 soybeans? Iowa farmers have not seen such price strength since 1996 for corn and 1974 for soybeans. At the same time, Iowa hog prices have strengthened in recent months; egg prices have more than doubled in the last two years; and cattle prices

would be at record highs if U.S. export markets had not closed down as a result of the mad cow disease scare. Even so, cattle prices have hovered around \$85.

Across the board, Iowa farmers are enjoying the benefits of a commodity boom. As farmers, processors, and input suppliers adjust to this new reality of higher commodity prices, some key questions arise: Could prices go higher? How long will this price strength last? Will the rest of this decade resemble the 1970s, with high inflation rates and skyrocketing interest rates, rather than the 1990s? Of course, nobody is certain of the answers (or we'd see more people leading lives of leisure and luxury through a few well-placed trades), but some insights can be obtained by examining the economic fundamentals that we are facing today.

I focus here on corn and soybeans, because over time, changes in feed prices are the primary determinants of what happens to livestock prices. Cheap feed translates into expanded supplies and lower prices. Expensive feed eventually translates into a drop in supplies and higher prices.

Why high prices now?

Figure 1 puts the recent price strength into a historical perspective. As shown, corn and soybean prices have been moving higher since about 2000, with the sharpest increase occurring after the 2003 harvest. An examination of why we have these higher prices now will help us judge whether they will continue or

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Handbook Updates

For those of you subscribing to the *Ag Decision Maker Handbook*, the following updates are included.

2004 Corn and Soybean Loan Rates – File A1-34 (2 pages)

2004 Farmland Cash Rental Rates – File C2-10 (13 pages)

Please add these files to your handbook and remove the out-of-date material.

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whether we will soon be back to the situation that existed in the late 1990s.

Soybeans

U.S. soybean prices have doubled in the last two years and are up by about 70 percent in the last year alone. There are a number of factors underpinning strong soybean prices. The first factor is that the U.S. soybean crop in 2003 was the lowest it has been since 1996, down 16 percent from its peak in 2001. With less production, prices move higher. Under reasonable assumptions, the decrease in U.S. production has led to perhaps a 20 percent price increase, holding demand constant. But demand has been growing.

Large U.S. and South American soybean crops in recent years have led to increased use, both domestically and internationally. Just as it takes time to build up use rates, once they are built up, it takes time to adjust use downward in response to higher prices. Export demand has also been enhanced somewhat by a weaker U.S. dollar, which effectively decreases the price of U.S. products in foreign markets. Strong demand growth possibly accounts for another 15 percent price increase.

Much of the increase in world demand for soybeans and soybean products since 1990 has been filled by Brazil. As shown in Figure 2, Brazil has about tripled its production since 1990. The world has come to expect dramatically increasing soybean production from Brazil, and until this year, Brazilian crops have grown faster than expected. However, the crop that was just harvested was a disappointment. Planted acreage increased by 13 percent in Brazil in 2003 but production was flat, which implies that yield decreased below trend yields by about 13 percent.

Thus, world markets have had to contend with sharply lower-than-expected production in both Brazil and the United States.

The Brazilian shortage accounts for perhaps another 15 to 20 percent price increase.

Therefore, the higher U.S. soybean prices are accounted for by strong demand combined with short crops in South and North America, as well as a weaker dollar. So we would need for these factors to continue in order to see continued high soybean prices.

USDA reports that U.S. farmers expect to plant 75.4 million acres of soybeans this year. At a trend yield of 39 bushels per planted acre, U.S. production in 2004 would be about 2.94 billion bushels, or 21.5 percent higher than the 2003 crop. Brazilian soybean production is projected to increase by about 23 percent if their next crop achieves trend yield. Production in Argentina is expected to increase also, by about 10 percent. Given that the United States and South America are by far the largest soybean

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producers in the world, a return to trend yields will result in a fairly large drop in soybean prices beginning with the U.S. harvest in late August. In addition, current strong soybean prices imply that countries that produce competing oils (palm, sunflower, peanut, and rapeseed) have an incentive to expand production. If decent growing conditions return, we should see a 25 to 40 percent decline in soybean prices next year, assuming that the dollar stays at about the same level of exchange.

Of course, if we have another short crop, then we will see prices climb even higher than those that we see today. The 2003 U.S. soybean crop was about as short a soybean crop as could be expected. A repeat of this crop would mean production of about 2.4 billion bushels. This type of crop would send prices sharply higher next fall and winter, as the world waits for news about the South American crop.

Corn

Corn prices have been slowly rising since August of 2000. As shown in Figure 3, this change in price direction coincides markedly with the beginning of a decline in the world stocks-to-use ratio of corn. A decline in this ratio is perhaps the best indicator that demand growth is outpacing supply growth. By itself, a moderate decline in the stocks-to-use ratio does not signal higher prices, but a decline does signal an increase in the potential for sharply higher prices if either supply unexpectedly decreases or demand unexpectedly increases.

By almost all measures, world corn supplies are plentiful. Total world production in 2003 was almost equal to an all-time high. U.S. corn production was its highest ever. This suggests that unexpectedly strong demand must be the reason for the strong prices.

The weaker U.S. dollar has increased demand for U.S. corn exports. This increase in demand shows up as an increase in U.S. corn prices. The other source of demand growth is the increased growth of U.S. ethanol plants. In January 2001, there were approximately 2 billion gallons of ethanol capacity either in operation or under

construction in the United States. There is now 3.7 billion gallons of capacity. This added capacity represents approximately 620 million bushels of corn, or about 6 percent of the U.S. corn crop. And finally, there has been some demand growth that occurred in response to higher soybean prices, as producers adjusted their feed rations.

USDA projects that U.S. corn farmers will plant about 78 million acres in 2004. This represents another 10-billion-bushel corn crop at the trend yield. There is no reason to believe that demand growth will slow substantially, which suggests that the likelihood of a large price drop is significantly lower for corn than for soybeans. Ideal growing conditions could result in an 11-billion-bushel crop. This is the size of crop that we would have to see if we expect to see a dramatic decrease in corn prices.

The stocks-to-use ratio for corn is projected to decline to about 10 percent at the end of this marketing year. This suggests that if we have a repeat of 1988 or 1993, then corn production could decline by 20 percent or more. This would likely raise corn prices by at least 40 percent above the levels that we see today.

Current market conditions indicate that corn prices are much more likely to remain at current levels than are soybean prices. Strong demand for corn from both domestic and international sources and a shrinking stocks-to-use ratio suggests that it will take a fairly large corn and feed grain crop to cause a substantial drop in price. In the case of soybeans, a return to trend yields should result in a sharp drop in price.

Policy implications

Current federal commodity policy is designed to compensate crop farmers for low prices. Corn and soybean farmers will not receive a countercyclical payment for their 2003 crop, and few, if any, received a loan deficiency payment last fall. However, Iowa farmers will receive their direct payments because these arrive regardless of yields or prices. These

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payments will total about \$512 million for Iowa farmers for their 2003 crop.

Recall that there were two justifications for moving toward decoupled payments with the 1996 farm bill. As their original name implies, Agricultural Market Transition Act (AMTA) payments were advertised as payments that would transition farmers away from government assistance toward reliance on markets. The second justification was that decoupled payments are not counted as being trade distorting under World Trade Organization (WTO) rules. Do either of these justifications hold today?

The large increase in federal assistance in the late 1990s and passage of the 2002 farm bill reveals that Congress has no intention of transitioning farmers away from government assistance. The name change in the decoupled payments from *transition* payments to *direct* payments perhaps is the best indicator of congressional intentions.

However, the WTO justification is just as valid today as ever. The European Union (EU) is

moving ever faster toward use of decoupled payments as its main means of supporting farm incomes. In some areas, these payments are facilitating the consolidation of farms into more economically viable units that can make profits with lower government-guaranteed prices.

Clearly, decoupled payments will play a central role if a new WTO agreement is to be successfully negotiated. Such payments give farmers the incentive to look to the marketplace for cues about what to plant and how to grow their crops. Thus they serve to defuse the arguments that have been used successfully by developing countries and other exporters that high U.S. and EU domestic subsidies cause overproduction and lower world prices.

A potential downside of decoupled payments, however, is that they are difficult to justify when prices are good and farm income is high. How can it be equitable that Iowa farmers will receive \$512 million from the government even though farm income is high? Such questions should be anticipated as Congress and the administration struggle to balance the federal books in the coming years.



Meals and lodging: Not deductible for non-employees

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Four cases, decided on November 25, 2003, have re-emphasized the importance of being able to prove employee status if attempting to claim deductions for employee benefits. The four cases all involved meals and lodging as well as medical expense deductibility but the basic message extends to all employee benefits.

Tax Court cases

In the first of the cases, *Weeldreyer v. Commissioner*, the taxpayers had formed Dreyer Farms, Inc. and conveyed all of the taxpayer's farmland (including the farmhouse) to the newly-formed corporation with the corporation assuming the

mortgage on the property. The taxpayers (husband and wife) owned all of the stock in the corporation. The corporation adopted a medical reimbursement plan and also paid the premiums on a health insurance policy covering the taxpayers and their children. The corporation adopted a resolution requiring all officers and employees "...to live at the worksite of the corporation to ensure security for the corporation property and operation...[and] to supervise the care and feeding of the livestock of the corporation."

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